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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/540,916	07/21/2005	Massimo Bergamasco	05086	8712

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EXAMINER

RAEVIS, ROBERT R

ART UNIT PAPER NUMBER

2856

DATE MAILED: 03/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/540,916

Applicant(s)

BERGAMASCO ET AL.

Examiner

Robert R. Raevis

Art Unit

2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 7-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10-19-05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Election of Group I has been received.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: channel 4b (p. 11) glove 50 (p. 11), sensor 1' (p. 12), . Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claims 2-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 2, isn't the "medium" that transmits a signal the "fibre" itself? In that event, the same structure is being claimed twice. On the other hand, it is possible that Applicant is claiming features (fibre, and fluid medium) of two different species in the

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same apparatus claim, and thus the claim is not consistent with the originally filed written specification and drawings.

As to claim 3, "said medium" and "the channel" lack antecedent basis. Also, isn't claim 1's "fibre" part of the cable, and thus the same element is being claimed twice?

As to claim 4, "said measuring for measuring recording" lacks antecedent basis.

As to claim 5, replace "are" (line 2) with – is --, and what does "etc" refer to?

As to claim 7, this claim is combining limitations (fibre, of claim 1) and (compressible fluid, of claim 7) of two different species.

As to claim 8, this claim is combining limitations (fibre, of claim 1) and (incompressible fluid, of claim 7) of two different species.

As to claim 9, "it" is indefinite, and after "according" (line 3) insert – to --.

As to claim 10, what does "ab/" mean? What does "ab" mean?

As to claim 12, "it" (line 2) is indefinite.

Claims 1,2,5 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Slocum.

Slocum teaches (Figure 2b) a sensor, including: flexible element 302 extending between two joints, the element having a neutral axis, and beam 303 spaced from the axis and extending from one joint to the other; and means 307 for measuring length variation of the beam, the rotation being proportional to the length variation over a narrow range of rotation.

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Slocum does not call the beam 303 a fiber.

As to claims 1,2,5 and 6, a fiber is a slender, elongated structure, and thus Slocum's beam is a fiber.

Claims 1,2,5 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Danishch.

Danishch teaches (Figure 1) a sensor, including: flexible element 11 having neutral axis, with a fiber 13 spaced from the neutral axis that extends across the element; and means 16 for measuring "displacement" (col. 8, line 61).

Danishch does not state that there are objects on the beam.

As to claims 1,2,5 and 6, it would have been obvious to employ objects on the ends of the beam 11 as Danishch teaches (col. 3, lines 35+) use of such a strain sensing system to measure displacement between two objects (for example, "joint angles and deflections on robots" (col. 2, line 63)).

Claims 3,4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Danishch.

As to claims 3 and 4, Danishch's fiber is suggestive of a cable permitting for multiple measurements for averaging/checking.

Claims 1,2,5 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Hodac.

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Hodac teaches a sensor, including (Figure 1, Para 32-35): flexible element 12 extending between two objects 1,1, and an optical fiber on the element; means 28 to measure angular deflection by detecting variation in distance between the elements (Para 33).

As to claims 1,2,5 and 6, the relative rotation is proportional to the length variation over at least a small range of rotation.

Claims 3,4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hodac.

As to claims 3 and 4, Hodac's fiber is suggestive of a cable permitting for multiple measurements for averaging/checking.

Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Challis.

Challis teaches a sensor, including: flexible element 20 with fiber 28 therein, and means 36 to measure longitudinal movement of the fiber, the movement "proportional" (col. 3, lines 44-45) angular displacement.

Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Hindes.

Hindes teaches a sensor, including: flexible element 12 with wires 18,19 therein, and means 24,26 to measure longitudinal movement of the fiber, the longitudinal movement is proportional to angular displacement. Reference is made to the "neutral" (col. 3, line 10) axis, and "single plane" (col. 3, line 17).

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Pfeiffer et al teach a goniometric device.

Neely et al teach capacitive sensor on a glove.


JP 64-41803 measures angle with strain sensors.

McGorry et al measure wrist motion.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert R. Raevis whose telephone number is 571-272-2204. The examiner can normally be reached on Monday to Friday from 5:30am to 3pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams, can be reached on 571-272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


RAEVIS